

LISTING OF CLAIMS

1(currently amended). A method for treating a substrate having an electrically conductive surface comprising:

preparing a medium having a basic pH and comprising water and at least one member selected from the group consisting of water soluble stannates, molybdates, vanadates and cerium compounds, and;

contacting at least a portion of the surface with [a] the medium [comprising at least one oxygen containing water soluble and having a basic pH and] wherein said medium is substantially free of chromates[,

drying the substrate,

rinsing the substrate, and;

again drying the substrate].

2(currently amended). [An aqueous medium for use in increasing the electrical resistance of a conductive surface comprising a combination comprising water, at least one member selected from the group of water soluble stannates, molybdates, vanadates and hydrated cerium compounds, wherein the medium has a basic pH and is substantially free of chromates] The method of Claim 1 wherein the medium is heated to a temperature of about 50 to about 100C prior to said contacting.

3(currently amended). The [medium of Claim 2] The method of Claim 1 wherein said medium further comprises colloidal silica.

4(original). The method of Claim 1 wherein the surface comprises at least one member selected from the group consisting of copper, nickel, tin, iron, zinc, aluminum, magnesium, stainless steel and steel and alloys thereof.

5(currently amended). The method of Claim 1 wherein said method further comprises drying [is conducted] at a temperature of at least about 120C.

6(currently amended). The method of Claim [1] 5 further comprising applying at least one coating upon the last dried surface.

7(original). The method of Claim 1 further comprising applying an adherent composition comprising at least one member chosen from the group of latex, silanes, epoxies, silicone, amines, alkyds, urethanes and acrylics.

8(currently amended). The method of Claim 1 wherein said medium comprises [the medium of Claim 2] water, sodium hydroxide and sodium stannate.

9(currently amended). The method of Claim 1 wherein said medium comprises [the medium of Claim 3] water, sodium hydroxide and sodium molybdate.

10(currently amended). The medium of Claim [2] 1 wherein said water soluble compounds comprise at least one member selected from the group consisting of sodium stannate hydrate, sodium molybdate hydrate, ammonium metavanadate and cerium nitrate hydrate.

11(currently amended). The method of Claim [1] wherein the [pH is sufficient to at least partially dissolve the surface] metal surface comprises at least one member selected from the group consisting of iron, iron alloys, zinc and zinc alloys.

12(new). The method of Claim 1 wherein the medium further comprises at least one member selected from the group consisting of water dispersible polymers, at least one diluent, and at least one dopant

13(new). The method of Claim 1 wherein the amount of water soluble compounds ranges from about 3 to about 15 wt.% of the medium.

14(new). The method of Claim 1 further comprising supplying a current to the medium and wherein the metal surface comprises the cathode.

15(new). The method of Claim 1 further comprising at least one additional step selected from the group consisting of contacting the metal surface with at least one acid, drying the metal surface at a temperature, and rinsing the metal surface.

16(new). The method of Claim 1 wherein the medium comprises water, sodium hydroxide and cerium nitrate.

17(new). The method of Claim 1 wherein the medium comprises water, sodium hydroxide and ammonium metavanadate.

18(new). The method of Claim 1 further comprising treating the surface prior to said contacting with at least one process selected from the group consisting of contacting with an acidic medium, a basic medium, an oxidizing medium, and anodizing the substrate.

19(new). The method of Claim 1 wherein the medium comprises an electroless environment.